AMENDMENT TO THE CLAIMS:

The currently pending claims, as originally filed, are provided as follows:

1. (Currently Amended) A method of constructing a lookup table of modes for encoding data for transmission in a wireless communication channel from a transmit unit to a receive unit, said method comprising:

a) selecting at least one short-term quality parameter ~~of said data~~ associated with the communication channel as received by said receive unit;

b) determining a first-order statistical parameter of said at least one quality parameter;

c) determining a second-order statistical parameter of said at least one quality parameter; and

d) arranging said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter.

2. (Original) The method of claim 1, wherein said first-order statistical parameter and said second-order statistical parameter are determined from a simulation of said wireless communication channel.

3. (Original) The method of claim 1, wherein said first-order statistical parameter and said second-order statistical parameter are determined from a field measurement of said wireless communication channel.

4. (Original) The method of claim 1 further comprising:

a) selecting a communication parameter;

b) setting a target value of said communication parameter; and

c) arranging said modes in said lookup table based on said target value.

5. (Currently Withdrawn) The method of claim 4, wherein said communication parameter is selected from the group consisting of bit error rate, packet error rate, data capacity, signal quality, spectral efficiency and throughput.

6. (Original) The method of claim 4, wherein said communication parameter is a statistical communication parameter.

7. (Original) The method of claim 4, further comprising:

a) measuring a measured value of said communication parameter in said wireless communication channel;

b) assigning an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value.

8. (Currently Withdrawn) The method of claim 1, wherein said quality parameter is a short-term quality parameter.

9. (Currently Amended) The method of claim ~~8~~ 1, wherein said second-order statistical parameter comprises a variance of said short-term quality parameter.

10. (Original) The method of claim 9, wherein said variance is selected from the group consisting of temporal variance and frequency variance.

11. (Original) The method of claim 8, wherein said short-term quality parameter is selected from the group consisting of signal-to-interference and noise ratio, signal-to-noise ratio and power level.

12. (Original) The method of claim 1, wherein said first-order statistical parameter comprises a mean of said at least one quality parameter.

13. (Original) The method of claim 1, wherein said second-order statistical parameter comprises a variance of said at least one quality parameter.

14. (Original) The method of claim 13, wherein said data is transmitted at more than one frequency and said variance is a frequency variance.

15. (Original) The method of claim 13, wherein said data is transmitted in a multi-carrier scheme and said variance is a frequency variance.

16. (Original) The method of claim 13, wherein said variance is a temporal variance.

17. (Previously Withdrawn) The method of claim 1, wherein said transmitting step is performed in accordance with a transmission technique selected from the group consisting of OFDMA, FDMA, CDMA, TDMA.

18. (Currently Amended) A storage medium tangibly embodying a lookup table of modes for encoding data for transmission in a wireless communication channel from a transmit unit to a receive unit, said storage medium comprising instructions for:

a) selecting at least one short term quality parameter ~~of said data~~ associated with the communication channel as received by said receive unit;

b) determining a first-order statistical parameter of said at least one quality parameter;

c) determining a second-order statistical parameter of said at least one quality parameter; and

d) arranging said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter.

19. (Original) The storage medium of claim 18, further comprising instructions for:

a) selecting a communication parameter;

b) setting a target value of said communication parameter; and

c) arranging said modes in said lookup table based on said target value.

20. (Previously Amended) The storage medium of claim 19, further comprising instructions for:

a) measuring a measured value of said communication parameter in said wireless communication channel; and

b) assigning an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value.

21. (New) A storage medium according to claim 18, wherein the second-order statistical parameter is a variance of the quality parameter.

22. (New) A storage medium according to claim 21, wherein the communication channel is a multi-carrier communication channel, and the second-order statistical parameter is a frequency variance of the quality parameter.

23. (New) A receiver comprising:

a quality parameter statistics computation block to select at least one short-term quality parameter associated with the communication channel as received by said receive unit, to determine a first-order statistical parameter of said at least one quality parameter, and to determine a second-order statistical parameter of said at least one quality parameter; and

a mode selection block, responsive to the quality parameter statistics computation block, to arrange said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter.

24. (New) A receiver according to claim 23, wherein the receiver resides in a client device communicatively coupled to a wireless communications network through a multi-carrier communication channel.

25. (New) A receiver according to claim 24, wherein the second-order statistical parameter is a frequency variance of the multi-carrier wireless communication channel.

26. (New) A receiver according to claim 24, wherein the mode selection block selects a communication parameter, generates a target value of said communication parameter, and arranges the modes in said lookup table based on said target value.

27. (New) A receiver according to claim 26, wherein the mode selection block measures a value of said communication parameter in said wireless communication channel, and develops an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value.

28. (New) A system comprising:

one or more substantially omnidirectional antennae(e), through which a wireless communication channel with a remote device is selectively established;

a quality parameter statistics computation block, responsive to the communication channel received via the antenna(e), to select at least one short-term quality parameter associated with the communication channel as received by said receive unit, to determine a first-order statistical parameter of said at least one quality parameter, and to determine a second-order statistical parameter of said at least one quality parameter; and

a mode selection block, responsive to the quality parameter statistics computation block, to arrange said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter.

29. (New) A system according to claim 28, wherein the communication channel is a multi-carrier communication channel.

30. (New) A system according to claim 29, wherein the second-order statistical parameter is a frequency variance of the multi-carrier wireless communication channel.

31. (New) A system according to claim 28, wherein the mode selection block selects a communication parameter, generates a target value of said communication parameter, and arranges the modes in said lookup table based on said target value.

32. (New) A system according to claim 31, wherein the mode selection block measures a value of said communication parameter in said wireless communication channel, and develops an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value.

Should it be determined that any additional fee is required, or overage returned, in association with this response, please debit or credit my deposit account number 50-0221 as appropriate.

Respectfully submitted,
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Dated: July 7, 2005 by: s/Michael A. Proksch/ Reg. No. 43,021/
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